



TECH CENTER 1600/2900

NOV 04 2002

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## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/688,672  
Source: 1600  
Date Processed by STIC: 10/25/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



Does Not Comply  
Corrected Diskette Needed

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:11

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

3 <110> APPLICANT: Skeiky, Yasir  
4 Reed, Steven  
5 Houghton, Raymond L.  
6 McNeill, Patricia D.  
7 Dillon, Davin C.  
8 Lodes, Michael L.  
9 Corixa Corporation  
11 <120> TITLE OF INVENTION: Fusion Proteins of Mycobacterium Tuberculosis  
13 <130> FILE REFERENCE: 014058-009041US  
15 <140> CURRENT APPLICATION NUMBER: US 09/688,672  
16 <141> CURRENT FILING DATE: 2000-10-10  
18 <150> PRIOR APPLICATION NUMBER: US 60/158,338  
19 <151> PRIOR FILING DATE: 1999-10-07  
21 <150> PRIOR APPLICATION NUMBER: US 60/158,425  
22 <151> PRIOR FILING DATE: 1999-10-07  
24 <160> NUMBER OF SEQ ID NOS: 202  
26 <170> SOFTWARE: PatentIn Ver. 2.1

See also p. 14 for  
additional errors

## ERRORED SEQUENCES

The type of errors shown exist throughout  
the Sequence Listing. Please check subsequent  
sequences for similar errors.

1088 <210> SEQ ID NO: 16  
1089 <211> LENGTH: 239  
1090 <212> TYPE: PRT  
1091 <213> ORGANISM: Artificial Sequence  
W--> 1092 <220> FEATURE: *throughout*  
1092 <223> OTHER INFORMATION: Description of Artificial Sequence: HTCC#1 (1-232)  
E--> 1094 <400> SEQUENCE: 16  
1095 Met His His His His His His Met Ser Arg Ala Phe Ile Ile Asp Pro  
1096 1 5 10 15  
1098 Thr Ile Ser Ala Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile  
1099 20 25 30  
1101 Pro Asn Gln Gly Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys  
1102 35 40 45  
1104 Ala Leu Glu Glu Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly  
1105 50 55 60  
1107 Ser Ala Ala Asp Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe  
1108 65 70 75 80  
1110 Phe Gln Glu Leu Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His  
1111 85 90 95  
1113 Asp Gln Ala Asn Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala  
1114 100 105 110  
1116 Lys Lys Gly Leu Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:12

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

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1117      115      120      125
1119 Ile Pro Val Val Gly His Ala Leu Ser Ala Ala Phe Gln Ala Pro Phe
1120      130      135      140
1122 Cys Ala Gly Ala Met Ala Val Val Gly Gly Ala Leu Ala Tyr Leu Val
1123 145      150      155      160
1125 Val Lys Thr Leu Ile Asn Ala Thr Gln Leu Leu Lys Leu Ala Lys
1126      165      170      175
1128 Leu Ala Glu Leu Val Ala Ala Ala Ile Ala Asp Ile Ile Ser Asp Val
1129      180      185      190
1131 Ala Asp Ile Ile Lys Gly Ile Leu Gly Glu Val Trp Glu Phe Ile Thr
1132      195      200      205
1134 Asn Ala Leu Asn Gly Leu Lys Glu Leu Trp Asp Lys Leu Thr Gly Trp
1135      210      215      220
1137 Val Thr Gly Leu Phe Ser Arg Gly Trp Ser Asn Leu Glu Ser Phe
1138 225      230      235
1212 <210> SEQ ID NO: 18
1213 <211> LENGTH: 216
1214 <212> TYPE: PRT
1215 <213> ORGANISM: Artificial Sequence
W--> 1216 <220> FEATURE:
1216 <223> OTHER INFORMATION: Description of Artificial Sequence:HTCC#1
1217      (184-392)
E--> 1219 <400> SEQUENCE: 18
1220 Met His His His His His His Asp Val Ala Asp Ile Ile Lys Gly Ile
1221 1      5      10      15
1223 Leu Gly Glu Val Trp Glu Phe Ile Thr Asn Ala Leu Asn Gly Leu Lys
1224      20      25      30
1226 Glu Leu Trp Asp Lys Leu Thr Gly Trp Val Thr Gly Leu Phe Ser Arg
1227      35      40      45
1229 Gly Trp Ser Asn Leu Glu Ser Phe Phe Ala Gly Val Pro Gly Leu Thr
1230      50      55      60
1232 Gly Ala Thr Ser Gly Leu Ser Gln Val Thr Gly Leu Phe Gly Ala Ala
1233 65      70      75      80
1235 Gly Leu Ser Ala Ser Ser Gly Leu Ala His Ala Asp Ser Leu Ala Ser
1236      85      90      95
1238 Ser Ala Ser Leu Pro Ala Leu Ala Gly Ile Gly Gly Gly Ser Gly Phe
1239      100      105      110
1241 Gly Gly Leu Pro Ser Leu Ala Gln Val His Ala Ala Ser Thr Arg Gln
1242      115      120      125
1244 Ala Leu Arg Pro Arg Ala Asp Gly Pro Val Gly Ala Ala Glu Gln
1245      130      135      140
1247 Val Gly Gly Gln Ser Gln Leu Val Ser Ala Gln Gly Ser Gln Gly Met
1248 145      150      155      160
1250 Gly Gly Pro Val Gly Met Gly Gly Met His Pro Ser Ser Gly Ala Ser
1251      165      170      175
1253 Lys Gly Thr Thr Thr Lys Lys Tyr Ser Glu Gly Ala Ala Ala Gly Thr
1254      180      185      190
1256 Glu Asp Ala Glu Arg Ala Pro Val Glu Ala Asp Ala Gly Gly Gly Gln
1257      195      200      205

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

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Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

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1313 <210> SEQ ID NO: 20
1314 <211> LENGTH: 136
1315 <212> TYPE: PRT
1316 <213> ORGANISM: Artificial Sequence
W--> 1317 <220> FEATURE:
1317 <223> OTHER INFORMATION: Description of Artificial Sequence:HTCC#1 (1-129)
E--> 1319 <400> SEQUENCE: 20
1320 Met His His His His His His Met Ser Arg Ala Phe Ile Ile Asp Pro
1321      1                      5                      10                      15
1323 Thr Ile Ser Ala Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile
1324      20                      25                      30
1326 Pro Asn Gln Gly Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys
1327      35                      40                      45
1329 Ala Leu Glu Glu Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly
1330      50                      55                      60
1332 Ser Ala Ala Asp Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe
1333      65                      70                      75                      80
1335 Phe Gln Glu Leu Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His
1336      85                      90                      95
1338 Asp Gln Ala Asn Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala
1339      100                     105                     110
1341 Lys Lys Gly Leu Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr
1342      115                     120                     125
1344 Ile Pro Val Val Gly His Ala Leu
1345      130                     135
1466 <210> SEQ ID NO: 22
1467 <211> LENGTH: 403
1468 <212> TYPE: PRT
1469 <213> ORGANISM: Artificial Sequence
W--> 1470 <220> FEATURE:
1470 <223> OTHER INFORMATION: Description of Artificial Sequence:HTCC#1 (TM-1)
E--> 1472 <400> SEQUENCE: 22
1473 Met His His His His His His Met Ser Arg Ala Phe Ile Ile Asp Pro
1474      1                      5                      10                      15
1476 Thr Ile Ser Ala Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile
1477      20                      25                      30
1479 Pro Asn Gln Gly Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys
1480      35                      40                      45
1482 Ala Leu Glu Glu Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly
1483      50                      55                      60
1485 Ser Ala Ala Asp Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe
1486      65                      70                      75                      80
1488 Phe Gln Glu Leu Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His
1489      85                      90                      95
1491 Asp Gln Ala Asn Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala
1492      100                     105                     110
1494 Lys Lys Gly Leu Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr

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## RAW SEQUENCE LISTING

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DATE: 10/25/2002

TIME: 15:44:12

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

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1495      115      120      125
1497 Ile Pro Val Val Gly His Ala Leu Ser Ala Ala Phe Gln Ala Pro Phe
1498      130      135      140
1500 Cys Ala Gly Ala Met Ala Val Val Gly Gly Ala Leu Lys Leu Ala Tyr
1501 145      150      155      160
1503 Leu Val Val Lys Thr Leu Ile Asn Ala Lys Leu Thr Gln Leu Leu Lys
1504      165      170      175
1506 Leu Leu Ala Lys Leu Ala Glu Leu Val Ala Ala Ala Ile Ala Asp Ile
1507      180      185      190
1509 Ile Ser Asp Val Ala Asp Ile Ile Lys Gly Ile Leu Gly Glu Val Trp
1510      195      200      205
1512 Glu Phe Ile Thr Asn Ala Leu Asn Gly Leu Lys Glu Leu Trp Asp Lys
1513      210      215      220
1515 Leu Thr Gly Trp Val Thr Gly Leu Phe Ser Arg Gly Trp Ser Asn Leu
1516 225      230      235      240
1518 Glu Ser Phe Phe Ala Gly Val Pro Gly Leu Thr Gly Ala Thr Ser Gly
1519      245      250      255
1521 Leu Ser Gln Val Thr Gly Leu Phe Gly Ala Ala Gly Leu Ser Ala Ser
1522      260      265      270
1524 Ser Gly Leu Ala His Ala Asp Ser Leu Ala Ser Ser Ala Ser Leu Pro
1525      275      280      285
1527 Ala Leu Ala Gly Ile Gly Gly Ser Gly Phe Gly Gly Leu Pro Ser
1528      290      295      300
1530 Leu Ala Gln Val His Ala Ala Ser Thr Arg Gln Ala Leu Arg Pro Arg
1531 305      310      315      320
1533 Ala Asp Gly Pro Val Gly Ala Ala Ala Glu Gln Val Gly Gly Gln Ser
1534      325      330      335
1536 Gln Leu Val Ser Ala Gln Gly Ser Gln Gly Met Gly Gly Pro Val Gly
1537      340      345      350
1539 Met Gly Gly Met His Pro Ser Ser Gly Ala Ser Lys Gly Thr Thr Thr
1540      355      360      365
1542 Lys Lys Tyr Ser Glu Gly Ala Ala Ala Gly Thr Glu Asp Ala Glu Arg
1543      370      375      380
1545 Ala Pro Val Glu Ala Asp Ala Gly Gly Gly Gln Lys Val Leu Val Arg
1546 385      390      395      400
1548 Asn Val Val
1669 <210> SEQ ID NO: 24
1670 <211> LENGTH: 403
1671 <212> TYPE: PRT
1672 <213> ORGANISM: Artificial Sequence
W--> 1673 <220> FEATURE:
1673 <223> OTHER INFORMATION: Description of Artificial Sequence:HTCC#1 (TM-2)
E--> 1675 <400> SEQUENCE: 24
1676 Met His His His His His His Met Ser Arg Ala Phe Ile Ile Asp Pro
1677 1 5 10 15
1679 Thr Ile Ser Ala Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile
1680 20 25 30
1682 Pro Asn Gln Gly Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys
1683 35 40 45

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:12

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

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1685 Ala Leu Glu Glu Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly
1686      50      55      60
1688 Ser Ala Ala Asp Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe
1689 65      70      75      80
1691 Phe Gln Glu Leu Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His
1692      85      90      95
1694 Asp Gln Ala Asn Ala Val Gln Thr Thr Arg Asp Lys Leu Ile Leu Glu
1695      100      105      110
1697 Gly Ala Lys Lys Gly Leu Glu Phe Val Arg Pro Val Ala Val Asp Leu
1698      115      120      125
1700 Thr Tyr Ile Pro Val Val Gly His Ala Leu Ser Ala Ala Phe Gln Ala
1701      130      135      140
1703 Pro Phe Cys Ala Gly Ala Met Ala Val Val Gly Gly Ala Leu Ala Tyr
1704 145      150      155      160
1706 Leu Val Val Lys Thr Leu Ile Asn Ala Thr Gln Leu Leu Lys Leu Leu
1707      165      170      175
1709 Ala Lys Leu Ala Glu Leu Val Ala Ala Ala Ile Ala Asp Ile Ile Ser
1710      180      185      190
1712 Asp Val Ala Asp Ile Ile Lys Gly Ile Leu Gly Glu Val Trp Glu Phe
1713      195      200      205
1715 Ile Thr Asn Ala Lys Leu Leu Asn Gly Leu Lys Glu Leu Trp Asp Lys
1716      210      215      220
1718 Leu Thr Gly Trp Val Thr Gly Leu Phe Ser Arg Gly Trp Ser Asn Leu
1719 225      230      235      240
1721 Glu Ser Phe Phe Ala Gly Val Pro Gly Leu Thr Gly Ala Thr Ser Gly
1722      245      250      255
1724 Leu Ser Gln Val Thr Gly Leu Phe Gly Ala Ala Gly Leu Ser Ala Ser
1725      260      265      270
1727 Ser Gly Leu Ala His Ala Asp Ser Leu Ala Ser Ser Ala Ser Leu Pro
1728      275      280      285
1730 Ala Leu Ala Gly Ile Gly Gly Gly Ser Gly Phe Gly Gly Leu Pro Ser
1731      290      295      300
1733 Leu Ala Gln Val His Ala Ala Ser Thr Arg Gln Ala Leu Arg Pro Arg
1734 305      310      315      320
1736 Ala Asp Gly Pro Val Gly Ala Ala Ala Glu Gln Val Gly Gly Gln Ser
1737      325      330      335
1739 Gln Leu Val Ser Ala Gln Gly Ser Gln Gly Met Gly Gly Pro Val Gly
1740      340      345      350
1742 Met Gly Gly Met His Pro Ser Ser Gly Ala Ser Lys Gly Thr Thr Thr
1743      355      360      365
1745 Lys Lys Tyr Ser Glu Gly Ala Ala Ala Gly Thr Glu Asp Ala Glu Arg
1746      370      375      380
1748 Ala Pro Val Glu Ala Asp Ala Gly Gly Gly Gln Lys Val Leu Val Arg
1749 385      390      395      400
1751 Asn Val Val
3709 <210> SEQ ID NO: 58
3710 <211> LENGTH: 740
3711 <212> TYPE: PRT
3712 <213> ORGANISM: Artificial Sequence

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

W--&gt; 3713 &lt;220&gt; FEATURE:

3713 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: fusion protein

3714 HTCC#1(184-392)-TbH9-HTCC#1(1-129)

E--&gt; 3716 &lt;400&gt; SEQUENCE: 58

```

3717 Met His His His His His Asp Val Ala Asp Ile Ile Lys Gly Thr
3718   1          5          10          15
3720 Leu Gly Glu Val Trp Glu Phe Ile Thr Asn Ala Leu Asn Gly Leu Lys
3721          20          25          30
3723 Glu Leu Trp Asp Lys Leu Thr Gly Trp Val Thr Gly Leu Phe Ser Arg
3724          35          40          45
3726 Gly Trp Ser Asn Leu Glu Ser Phe Phe Ala Gly Val Pro Gly Leu Thr
3727          50          55          60
3729 Gly Ala Thr Ser Gly Leu Ser Gln Val Thr Gly Leu Phe Gly Ala Ala
3730          65          70          75          80
3732 Gly Leu Ser Ala Ser Ser Gly Leu Ala His Ala Asp Ser Leu Ala Ser
3733          85          90          95
3735 Ser Ala Ser Leu Pro Ala Leu Ala Gly Ile Gly Gly Gly Ser Gly Phe
3736          100         105         110
3738 Gly Gly Leu Pro Ser Leu Ala Gln Val His Ala Ala Ser Thr Arg Gln
3739          115         120         125
3741 Ala Leu Arg Pro Arg Ala Asp Gly Pro Val Gly Ala Ala Ala Glu Gln
3742          130         135         140
3744 Val Gly Gly Gln Ser Gln Leu Val Ser Ala Gln Gly Ser Gln Gly Met
3745          145         150         155         160
3747 Gly Gly Pro Val Gly Met Gly Gly Met His Pro Ser Ser Gly Ala Ser
3748          165         170         175
3750 Lys Gly Thr Thr Thr Lys Lys Tyr Ser Glu Gly Ala Ala Ala Gly Thr
3751          180         185         190
3753 Glu Asp Ala Glu Arg Ala Pro Val Glu Ala Asp Ala Gly Gly Gly Gln
3754          195         200         205
3756 Lys Val Leu Val Arg Asn Val Val Glu Phe Met Val Asp Phe Gly Ala
3757          210         215         220
3759 Leu Pro Pro Glu Ile Asn Ser Ala Arg Met Tyr Ala Gly Pro Gly Ser
3760          225         230         235         240
3762 Ala Ser Leu Val Ala Ala Ala Gln Met Trp Asp Ser Val Ala Ser Asp
3763          245         250         255
3765 Leu Phe Ser Ala Ala Ser Ala Phe Gln Ser Val Val Trp Gly Leu Thr
3766          260         265         270
3768 Val Gly Ser Trp Ile Gly Ser Ser Ala Gly Leu Met Val Ala Ala Ala
3769          275         280         285
3771 Ser Pro Tyr Val Ala Trp Met Ser Val Thr Ala Gly Gln Ala Glu Leu
3772          290         295         300
3774 Thr Ala Ala Gln Val Arg Val Ala Ala Ala Tyr Glu Thr Ala Tyr
3775          305         310         315         320
3777 Gly Leu Thr Val Pro Pro Pro Val Ile Ala Glu Asn Arg Ala Glu Leu
3778          325         330         335
3780 Met Ile Leu Ile Ala Thr Asn Leu Leu Gly Gln Asn Thr Pro Ala Ile
3781          340         345         350
3783 Ala Val Asn Glu Ala Glu Tyr Gly Glu Met Trp Ala Gln Asp Ala Ala

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TIME: 15:44:13

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4073 <211> LENGTH: 783
4074 <212> TYPE: PRT
4075 <213> ORGANISM: Artificial Sequence
W--> 4076 <220> FEATURE:
4076 <223> OTHER INFORMATION: Description of Artificial Sequence:fusion protein
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E--> 4079 <400> SEQUENCE: 60
4080 Met His His His His His His Met Ser Arg Ala Phe Ile Ile Asp Pro
4081   1             5             10             15
4083 Thr Ile Ser Ala Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile
4084             20             25             30
4086 Pro Asn Gln Gly Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys
4087             35             40             45
4089 Ala Leu Glu Glu Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly
4090             50             55             60
4092 Ser Ala Ala Asp Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe
4093   65             70             75             80
4095 Phe Gln Glu Leu Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His
4096             85             90             95
4098 Asp Gln Ala Asn Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala
4099             100            105            110
4101 Lys Lys Gly Leu Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr
4102             115            120            125
4104 Ile Pro Val Val Gly His Ala Leu Ser Ala Ala Phe Gln Ala Pro Phe
4105             130            135            140
4107 Cys Ala Gly Ala Met Ala Val Val Gly Gly Ala Leu Lys Leu Met Val
4108   145            150            155            160
4110 Asp Phe Gly Ala Leu Pro Pro Glu Ile Asn Ser Ala Arg Met Tyr Ala
4111             165            170            175
4113 Gly Pro Gly Ser Ala Ser Leu Val Ala Ala Ala Gln Met Trp Asp Ser
4114             180            185            190
4116 Val Ala Ser Asp Leu Phe Ser Ala Ala Ser Ala Phe Gln Ser Val Val
4117             195            200            205
4119 Trp Gly Leu Thr Val Gly Ser Trp Ile Gly Ser Ser Ala Gly Leu Met
4120             210            215            220
4122 Val Ala Ala Ala Ser Pro Tyr Val Ala Trp Met Ser Val Thr Ala Gly
4123   225            230            235            240
4125 Gln Ala Glu Leu Thr Ala Ala Gln Val Arg Val Ala Ala Ala Tyr
4126             245            250            255
4128 Glu Thr Ala Tyr Gly Leu Thr Val Pro Pro Val Ile Ala Glu Asn
4129             260            265            270
4131 Arg Ala Glu Leu Met Ile Leu Ile Ala Thr Asn Leu Leu Gly Gln Asn
4132             275            280            285
4134 Thr Pro Ala Ile Ala Val Asn Glu Ala Glu Tyr Gly Glu Met Trp Ala
4135             290            295            300
4137 Gln Asp Ala Ala Ala Met Phe Gly Tyr Ala Ala Ala Thr Ala Thr Ala
4138   305            310            315            320
4140 Thr Ala Thr Leu Leu Pro Phe Glu Glu Ala Pro Glu Met Thr Ser Ala

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TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

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4141          325          330          335
4143 Gly Gly Leu Leu Glu Gln Ala Ala Val Glu Glu Ala Ser Asp Thr
4144          340          345          350
4146 Ala Ala Ala Asn Gln Leu Met Asn Asn Val Pro Gln Ala Leu Gln Gln
4147          355          360          365
4149 Leu Ala Gln Pro Thr Gln Gly Thr Thr Pro Ser Ser Lys Leu Gly Gly
4150          370          375          380
4152 Leu Trp Lys Thr Val Ser Pro His Arg Ser Pro Ile Ser Asn Met Val
4153 385          390          395          400
4155 Ser Met Ala Asn Asn His Met Ser Met Thr Asn Ser Gly Val Ser Met
4156          405          410          415
4158 Thr Asn Thr Leu Ser Ser Met Leu Lys Gly Phe Ala Pro Ala Ala Ala
4159          420          425          430
4161 Ala Gln Ala Val Gln Thr Ala Ala Gln Asn Gly Val Arg Ala Met Ser
4162          435          440          445
4164 Ser Leu Gly Ser Ser Leu Gly Ser Ser Gly Leu Gly Gly Gly Val Ala
4165          450          455          460
4167 Ala Asn Leu Gly Arg Ala Ala Ser Val Gly Ser Leu Ser Val Pro Gln
4168 465          470          475          480
4170 Ala Trp Ala Ala Ala Asn Gln Ala Val Thr Pro Ala Ala Arg Ala Leu
4171          485          490          495
4173 Pro Leu Thr Ser Leu Thr Ser Ala Ala Glu Arg Gly Pro Gly Gln Met
4174          500          505          510
4176 Leu Gly Gly Leu Pro Val Gly Gln Met Gly Ala Arg Ala Gly Gly Gly
4177          515          520          525
4179 Leu Ser Gly Val Leu Arg Val Pro Pro Arg Pro Tyr Val Met Pro His
4180          530          535          540
4182 Ser Pro Ala Ala Gly Lys Leu Thr Gln Leu Leu Lys Leu Leu Ala Lys
4183 545          550          555          560
4185 Leu Ala Glu Leu Val Ala Ala Ala Ile Ala Asp Ile Ile Ser Asp Val
4186          565          570          575
4188 Ala Asp Ile Ile Lys Gly Ile Leu Gly Glu Val Trp Glu Phe Ile Thr
4189          580          585          590
4191 Asn Ala Leu Asn Gly Leu Lys Glu Leu Trp Asp Lys Leu Thr Gly Trp
4192          595          600          605
4194 Val Thr Gly Leu Phe Ser Arg Gly Trp Ser Asn Leu Glu Ser Phe Phe
4195          610          615          620
4197 Ala Gly Val Pro Gly Leu Thr Gly Ala Thr Ser Gly Leu Ser Gln Val
4198 625          630          635          640
4200 Thr Gly Leu Phe Gly Ala Ala Gly Leu Ser Ala Ser Ser Gly Leu Ala
4201          645          650          655
4203 His Ala Asp Ser Leu Ala Ser Ser Ala Ser Leu Pro Ala Leu Ala Gly
4204          660          665          670
4206 Ile Gly Gly Gly Ser Gly Phe Gly Gly Leu Pro Ser Leu Ala Gln Val
4207          675          680          685
4209 His Ala Ala Ser Thr Arg Gln Ala Leu Arg Pro Arg Ala Asp Gly Pro
4210          690          695          700
4212 Val Gly Ala Ala Ala Glu Gln Val Gly Gly Gln Ser Gln Leu Val Ser
4213 705          710          715          720

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## RAW SEQUENCE LISTING

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DATE: 10/25/2002

TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

4215 Ala Gln Gly Ser Gln Gly Met Gly Gly Pro Val Gly Met Gly Gly Met  
 4216 725 730 735  
 4218 His Pro Ser Ser Gly Ala Ser Lys Gly Thr Thr Thr Lys Lys Tyr Ser  
 4219 740 745 750  
 4221 Glu Gly Ala Ala Ala Gly Thr Glu Asp Ala Glu Arg Ala Pro Val Glu  
 4222 755 760 765  
 4224 Ala Asp Ala Gly Gly Gly Gln Lys Val Leu Val Arg Asn Val Val  
 4225 770 775 780

4447 &lt;210&gt; SEQ ID NO: 62

4448 &lt;211&gt; LENGTH: 811

4449 &lt;212&gt; TYPE: PRT

4450 &lt;213&gt; ORGANISM: Artificial Sequence

W--&gt; 4451 &lt;220&gt; FEATURE:

4451 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: fusion protein

4452 HTCC#1(184-392)-TbH9-HTCC#1(1-200)

E--&gt; 4454 &lt;400&gt; SEQUENCE: 62

4455 Met His His His His His His Asp Val Ala Asp Ile Ile Lys Gly Ile  
 4456 1 5 10 15  
 4458 Leu Gly Glu Val Trp Glu Phe Ile Thr Asn Ala Leu Asn Gly Leu Lys  
 4459 20 25 30  
 4461 Glu Leu Trp Asp Lys Leu Thr Gly Trp Val Thr Gly Leu Phe Ser Arg  
 4462 35 40 45  
 4464 Gly Trp Ser Asn Leu Glu Ser Phe Phe Ala Gly Val Pro Gly Leu Thr  
 4465 50 55 60  
 4467 Gly Ala Thr Ser Gly Leu Ser Gln Val Thr Gly Leu Phe Gly Ala Ala  
 4468 65 70 75 80  
 4470 Gly Leu Ser Ala Ser Ser Gly Leu Ala His Ala Asp Ser Leu Ala Ser  
 4471 85 90 95  
 4473 Ser Ala Ser Leu Pro Ala Leu Ala Gly Ile Gly Gly Gly Ser Gly Phe  
 4474 100 105 110  
 4476 Gly Gly Leu Pro Ser Leu Ala Gln Val His Ala Ala Ser Thr Arg Gln  
 4477 115 120 125  
 4479 Ala Leu Arg Pro Arg Ala Asp Gly Pro Val Gly Ala Ala Ala Glu Gln  
 4480 130 135 140  
 4482 Val Gly Gly Gln Ser Gln Leu Val Ser Ala Gln Gly Ser Gln Gly Met  
 4483 145 150 155 160  
 4485 Gly Gly Pro Val Gly Met Gly Gly Met His Pro Ser Ser Gly Ala Ser  
 4486 165 170 175  
 4488 Lys Gly Thr Thr Lys Lys Tyr Ser Glu Gly Ala Ala Ala Gly Thr  
 4489 180 185 190  
 4491 Glu Asp Ala Glu Arg Ala Pro Val Glu Ala Asp Ala Gly Gly Gly Gln  
 4492 195 200 205  
 4494 Lys Val Leu Val Arg Asn Val Val Glu Phe Met Val Asp Phe Gly Ala  
 4495 210 215 220  
 4497 Leu Pro Pro Glu Ile Asn Ser Ala Arg Met Tyr Ala Gly Pro Gly Ser  
 4498 225 230 235 240  
 4500 Ala Ser Leu Val Ala Ala Ala Gln Met Trp Asp Ser Val Ala Ser Asp  
 4501 245 250 255  
 4503 Leu Phe Ser Ala Ala Ser Ala Phe Gln Ser Val Val Trp Gly Leu Thr

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

```

4504          260          265          270
4506 Val Gly Ser Trp Ile Gly Ser Ser Ala Gly Leu Met Val Ala Ala Ala
4507          275          280          285
4509 Ser Pro Tyr Val Ala Trp Met Ser Val Thr Ala Gly Gln Ala Glu Leu
4510          290          295          300
4512 Thr Ala Ala Gln Val Arg Val Ala Ala Ala Tyr Glu Thr Ala Tyr
4513 305          310          315          320
4515 Gly Leu Thr Val Pro Pro Pro Val Ile Ala Glu Asn Arg Ala Glu Leu
4516          325          330          335
4518 Met Ile Leu Ile Ala Thr Asn Leu Leu Gly Gln Asn Thr Pro Ala Ile
4519          340          345          350
4521 Ala Val Asn Glu Ala Glu Tyr Gly Glu Met Trp Ala Gln Asp Ala Ala
4522          355          360          365
4524 Ala Met Phe Gly Tyr Ala Ala Ala Thr Ala Thr Ala Thr Ala Thr Leu
4525          370          375          380
4527 Leu Pro Phe Glu Glu Ala Pro Glu Met Thr Ser Ala Gly Gly Leu Leu
4528 385          390          395          400
4530 Glu Gln Ala Ala Ala Val Glu Glu Ala Ser Asp Thr Ala Ala Ala Asn
4531          405          410          415
4533 Gln Leu Met Asn Asn Val Pro Gln Ala Leu Gln Gln Leu Ala Gln Pro
4534          420          425          430
4536 Thr Gln Gly Thr Thr Pro Ser Ser Lys Leu Gly Gly Leu Trp Lys Thr
4537          435          440          445
4539 Val Ser Pro His Arg Ser Pro Ile Ser Asn Met Val Ser Met Ala Asn
4540          450          455          460
4542 Asn His Met Ser Met Thr Asn Ser Gly Val Ser Met Thr Asn Thr Leu
4543 465          470          475          480
4545 Ser Ser Met Leu Lys Gly Phe Ala Pro Ala Ala Ala Ala Gln Ala Val
4546          485          490          495
4548 Gln Thr Ala Ala Gln Asn Gly Val Arg Ala Met Ser Ser Leu Gly Ser
4549          500          505          510
4551 Ser Leu Gly Ser Ser Gly Leu Gly Gly Gly Val Ala Ala Asn Leu Gly
4552          515          520          525
4554 Arg Ala Ala Ser Val Gly Ser Leu Ser Val Pro Gln Ala Trp Ala Ala
4555          530          535          540
4557 Ala Asn Gln Ala Val Thr Pro Ala Ala Arg Ala Leu Pro Leu Thr Ser
4558 545          550          555          560
4560 Leu Thr Ser Ala Ala Glu Arg Gly Pro Gly Gln Met Leu Gly Gly Leu
4561          565          570          575
4563 Pro Val Gly Gln Met Gly Ala Arg Ala Gly Gly Gly Leu Ser Gly Val
4564          580          585          590
4566 Leu Arg Val Pro Pro Arg Pro Tyr Val Met Pro His Ser Pro Ala Ala
4567          595          600          605
4569 Gly Asp Ile Met Ser Arg Ala Phe Ile Ile Asp Pro Thr Ile Ser Ala
4570          610          615          620
4572 Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile Pro Asn Gln Gly
4573 625          630          635          640
4575 Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys Ala Leu Glu Glu
4576          645          650          655

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

```

4578 Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly Ser Ala Ala Asp
4579           660           665           670
4581 Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe Phe Gln Glu Leu
4582           675           680           685
4584 Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His Asp Gln Ala Asn
4585           690           695           700
4587 Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala Lys Lys Gly Leu
4588 705           710           715           720
4590 Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr Ile Pro Val Val
4591           725           730           735
4593 Gly His Ala Leu Ser Ala Ala Phe Gln Ala Pro Phe Cys Ala Gly Ala
4594           740           745           750
4596 Met Ala Val Val Gly Gly Ala Leu Ala Tyr Leu Val Val Lys Thr Leu
4597           755           760           765
4599 Ile Asn Ala Thr Gln Leu Leu Lys Leu Leu Ala Lys Leu Ala Glu Leu
4600           770           775           780
4602 Val Ala Ala Ala Ile Ala Asp Ile Ile Ser Asp Val Ala Asp Ile Ile
4603 785           790           795           800
4605 Lys Gly Ile Leu Gly Glu Val Trp Glu Phe Ile
4606           805           810

```

4760 &lt;210&gt; SEQ ID NO: 64

4761 &lt;211&gt; LENGTH: 539

4762 &lt;212&gt; TYPE: PRT

4763 &lt;213&gt; ORGANISM: Artificial Sequence

W--&gt; 4764 &lt;220&gt; FEATURE:

4764 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: fusion protein

4765 TbRa12-HTCC#1

E--&gt; 4767 &lt;400&gt; SEQUENCE: 64

```

4768 Met His His His His His His Thr Ala Ala Ser Asp Asn Phe Gln Leu
4769 1           5           10           15
4771 Ser Gln Gly Gly Gln Gly Phe Ala Ile Pro Ile Gly Gln Ala Met Ala
4772           20           25           30
4774 Ile Ala Gly Gln Ile Arg Ser Gly Gly Gly Ser Pro Thr Val His Ile
4775           35           40           45
4777 Gly Pro Thr Ala Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn
4778           50           55           60
4780 Gly Ala Arg Val Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu
4781 65           70           75           80
4783 Gly Ile Ser Thr Gly Asp Val Ile Thr Ala Val Asp Gly Ala Pro Ile
4784           85           90           95
4786 Asn Ser Ala Thr Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly
4787           100          105          110
4789 Asp Val Ile Ser Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr
4790           115          120          125
4792 Gly Asn Val Thr Leu Ala Glu Gly Pro Pro Ala Glu Phe Leu Val Pro
4793           130          135          140
4795 Arg Gly Ser Met Ser Arg Ala Phe Ile Ile Asp Pro Thr Ile Ser Ala
4796 145          150          155          160
4798 Ile Asp Gly Leu Tyr Asp Leu Leu Gly Ile Gly Ile Pro Asn Gln Gly

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/688,672

DATE: 10/25/2002

TIME: 15:44:13

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

```

4799          165          170          175
4801 Gly Ile Leu Tyr Ser Ser Leu Glu Tyr Phe Glu Lys Ala Leu Glu Glu
4802          180          185          190
4804 Leu Ala Ala Ala Phe Pro Gly Asp Gly Trp Leu Gly Ser Ala Ala Asp
4805          195          200          205
4807 Lys Tyr Ala Gly Lys Asn Arg Asn His Val Asn Phe Phe Gln Glu Leu
4808          210          215          220
4810 Ala Asp Leu Asp Arg Gln Leu Ile Ser Leu Ile His Asp Gln Ala Asn
4811 225          230          235          240
4813 Ala Val Gln Thr Thr Arg Asp Ile Leu Glu Gly Ala Lys Lys Gly Leu
4814          245          250          255
4816 Glu Phe Val Arg Pro Val Ala Val Asp Leu Thr Tyr Ile Pro Val Val
4817          260          265          270
4819 Gly His Ala Leu Ser Ala Ala Phe Gln Ala Pro Phe Cys Ala Gly Ala
4820          275          280          285
4822 Met Ala Val Val Gly Gly Ala Leu Ala Tyr Leu Val Val Lys Thr Leu
4823          290          295          300
4825 Ile Asn Ala Thr Gln Leu Leu Lys Leu Leu Ala Lys Leu Ala Glu Leu
4826 305          310          315          320
4828 Val Ala Ala Ala Ile Ala Asp Ile Ile Ser Asp Val Ala Asp Ile Ile
4829          325          330          335
4831 Lys Gly Ile Leu Gly Glu Val Trp Glu Phe Ile Thr Asn Ala Leu Asn
4832          340          345          350
4834 Gly Leu Lys Glu Leu Trp Asp Lys Leu Thr Gly Trp Val Thr Gly Leu
4835          355          360          365
4837 Phe Ser Arg Gly Trp Ser Asn Leu Glu Ser Phe Phe Ala Gly Val Pro
4838          370          375          380
4840 Gly Leu Thr Gly Ala Thr Ser Gly Leu Ser Gln Val Thr Gly Leu Phe
4841 385          390          395          400
4843 Gly Ala Ala Gly Leu Ser Ala Ser Ser Gly Leu Ala His Ala Asp Ser
4844          405          410          415
4846 Leu Ala Ser Ser Ala Ser Leu Pro Ala Leu Ala Gly Ile Gly Gly Gly
4847          420          425          430
4849 Ser Gly Phe Gly Gly Leu Pro Ser Leu Ala Gln Val His Ala Ala Ser
4850          435          440          445
4852 Thr Arg Gln Ala Leu Arg Pro Arg Ala Asp Gly Pro Val Gly Ala Ala
4853          450          455          460
4855 Ala Glu Gln Val Gly Gly Gln Ser Gln Leu Val Ser Ala Gln Gly Ser
4856 465          470          475          480
4858 Gln Gly Met Gly Gly Pro Val Gly Met Gly Gly Met His Pro Ser Ser
4859          485          490          495
4861 Gly Ala Ser Lys Gly Thr Thr Thr Lys Lys Tyr Ser Glu Gly Ala Ala
4862          500          505          510
4864 Ala Gly Thr Glu Asp Ala Glu Arg Ala Pro Val Glu Ala Asp Ala Gly
4865          515          520          525
4867 Gly Gly Gln Lys Val Leu Val Arg Asn Val Val
4868          530          535

```

## VARIABLE LOCATION SUMMARY

DATE: 10/25/2002

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Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of &lt;220&gt; to &lt;223&gt; is MANDATORY if n's or Xaa's are present.

in &lt;220&gt; to &lt;223&gt; section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:5; N Pos. 406

Seq#:11; N Pos. 325,328,348,353,442,659,679

Seq#:12; Xaa Pos. 63,121,285

Seq#:29; N Pos. 1460,1854

Seq#:33; N Pos. 497,500,1136,1445,1487,1509,1515

Seq#:155; N Pos. 104

## VERIFICATION SUMMARY

DATE: 10/25/2002

PATENT APPLICATION: US/09/688,672

TIME: 15:44:15

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

L:599 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5  
L:599 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5  
L:599 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:360  
L:821 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:300  
L:823 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:420  
L:826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:600  
L:827 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:660  
L:853 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:48  
L:865 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:112  
L:895 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:272  
L:1083 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:15  
L:1092 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16  
L:1094 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:16  
L:1216 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18  
L:1219 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:18  
L:1317 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:1319 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:20  
L:1470 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:1472 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:22  
L:1673 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24  
L:1675 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:24  
L:1990 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:29  
L:1990 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:29  
L:1990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:1440  
L:1996 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:1800  
L:2228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:480  
L:2238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:1080  
L:2244 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:1440  
L:2245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:1500  
L:2481 M:283 W: Missing Blank Line separator, <400> field identifier  
L:2482 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (41) SEQUENCE:  
L:2486 M:283 W: Missing Blank Line separator, <400> field identifier  
L:2487 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (42) SEQUENCE:  
L:3497 M:283 W: Missing Blank Line separator, <400> field identifier  
L:3498 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (55) SEQUENCE:  
L:3502 M:283 W: Missing Blank Line separator, <400> field identifier  
L:3503 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (56) SEQUENCE:  
L:3713 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:58  
L:3716 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:58  
L:4076 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:60  
L:4079 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:60  
L:4451 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:62  
L:4454 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:62  
L:4757 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:63  
L:4764 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:64  
L:4767 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:64  
L:4872 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4873 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (65) SEQUENCE:



## VERIFICATION SUMMARY

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TIME: 15:44:15

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

L:4877 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4878 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (66) SEQUENCE:  
L:4882 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4883 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (67) SEQUENCE:  
L:4887 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4888 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (68) SEQUENCE:  
L:4892 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4893 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (69) SEQUENCE:  
L:4897 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4898 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (70) SEQUENCE:  
L:4902 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4903 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (71) SEQUENCE:  
L:4907 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4908 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (72) SEQUENCE:  
L:4912 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4913 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (73) SEQUENCE:  
L:4917 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4918 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (74) SEQUENCE:  
L:4922 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4923 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (75) SEQUENCE:  
L:4927 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4928 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (76) SEQUENCE:  
L:4932 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4933 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (77) SEQUENCE:  
L:4937 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4938 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (78) SEQUENCE:  
L:4942 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4943 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (79) SEQUENCE:  
L:4947 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4948 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (80) SEQUENCE:  
L:4952 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4953 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (81) SEQUENCE:  
L:4957 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4958 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (82) SEQUENCE:  
L:4962 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4963 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (83) SEQUENCE:  
L:4967 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4968 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (84) SEQUENCE:  
L:4972 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4973 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (85) SEQUENCE:  
L:4977 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4978 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (86) SEQUENCE:  
L:4982 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4983 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (87) SEQUENCE:  
L:4987 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4988 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (88) SEQUENCE:  
L:4992 M:283 W: Missing Blank Line separator, <400> field identifier  
L:4993 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (89) SEQUENCE:  
L:4997 M:283 W: Missing Blank Line separator, <400> field identifier

## VERIFICATION SUMMARY

DATE: 10/25/2002

PATENT APPLICATION: US/09/688,672

TIME: 15:44:15

Input Set : A:\-90-4-1.app

Output Set: N:\CRF4\10242002\I688672.raw

L:4998 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (90) SEQUENCE:  
L:6288 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:155  
L:6288 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:155  
L:6288 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155 after pos.:60